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EXAMINER

BOS, STEVEN J

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 02/11/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/744,809

Applicant(s)

Rojas-chapana et al

Examiner

Steven Bos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jan 17, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-21 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 9-21 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claims 9,21, "at least one carbon-containing compound" is new matter.

In claims 9,21, "homocysteine, and derivatives thereof" is new matter.

In claims 9,21, "and optionally one or more salts" is new matter.

In claim 9, "wherein the bacteria contacts the sulfidic material either as a component of the leaching fluid, or subsequently after removal of the leaching fluid, or both" is new matter.

In claim 11, "wherein the microorganisms are added after removal of the leaching fluid" is new matter.

Claims 9,21 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "homocysteine and amides or esters thereof", does not reasonably provide enablement for "homocysteine, and derivatives thereof." The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

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Claim 13 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for " $8 \times 10^{-3}M$ ", does not reasonably provide enablement for "about $8 \times 10^{-3}M$ ". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

Claim 14 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "1-4", does not reasonably provide enablement for "greater than about 1 and less than about 4." The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

Claim 15 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "1.5-2.0", does not reasonably provide enablement for "about 1.5 to 2". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

Claim 20 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for " 8×10^{-4} to $8 \times 10^{-5}M$ ", does not reasonably provide enablement for "about 8

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$\times 10^{-4}$ to about $8 \times 10^{-5} M$ ". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

^{10-13, 16, 19, 20}
Claims ~~9-21~~ are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 10-12, 16, "the microorganisms" lack(s) proper antecedent basis in the claim(s).

In claim 11, "wherein the microorganisms are added after removal of the leaching fluid" is indefinite as to what they are added to.

In claim 13, "the one or more amino acids or derivatives thereof" lack(s) proper antecedent basis in the claim(s).

In claim 19, "the amino acid derivatives" lack(s) proper antecedent basis in the claim(s).

In claim 20, "the amino acids or derivatives thereof" lack(s) proper antecedent basis in the claim(s).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 9,10,14-18,21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Rusin '624. See cols. 5,6,9,10,12,14.

Claim 21 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Wenberg et al. or Liu et al. See pp. 208,210 and Table 5; pp. 1542,1544, respectively.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rusin '624.

Rusin suggests the instantly claimed process of contacting a sulfide ore with an aqueous solution of Thiobacillus ferrooxidans and methionine to leach heavy metals therefrom at a pH of 1.6-2.4. Supra.

Rusin may differ as to the concentration of the amino acid however same would appear to be suggested because heavy metals are leached by the taught process as is instantly claimed.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within

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the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results, see *In re Boesch*, 205 USPQ 215.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, *In re Malagari*, 182 USPQ 549.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wenberg et al. or Liu et al.

Wenberg and Liu each suggest the instantly claimed process of contacting a sulfidic material with an aqueous solution of methionine or cysteine for what appears to be a sufficient amount of time to leach a metal therefrom. *Supra*.

Applicant's arguments filed January 17, 2003 have been fully considered but they are not persuasive.

Applicant states that Rusin does not teach the instantly claimed leaching fluid because it includes carbon-containing compounds not within the scope of claim 9.

However instant claim 9 does not exclude the taught carbon-containing compounds.

Applicant states that Rusin does not teach sulfur containing amino acids.

However methionine is taught in Table 2, claim 10 and claim 11 of Rusin.

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In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., bacteria, pH, concentrations of the amino acids, etc.) are not recited in claim 21. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

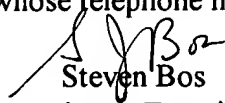
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Bos whose telephone number is (703) 308-2537. The examiner is on

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the increased flexitime program schedule and can normally be reached between 8AM and 6PM Monday through Friday. The FAX No. for After Final amendments is 703-872-9311; for all others it is 703-872-9310. Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0661.


Steven Bos
Primary Examiner
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